principles would produce, or without at least having some idea of how much SWBT's non-TELRIC assumptions inflated the rates above lawful levels, there is no basis for any finding that SWBT's arbitrary fixed-percentage discounts to those inflated rates has reduced them to TELRIC levels.

SWBT's arbitrary discounts are useless without "some explanation of the logic of the derivation" of the discount (*MCI* v. *FCC*, 143 F.3d 606, 608-609 (D.C. Cir. 1998)). Indeed, the Commission itself has specifically held that reducing NRCs by fixed percentage discounts cannot establish their lawfulness unless there is evidence that the reductions correct the defects in the original rates. Memorandum Opinion and Order, *Access and Divestiture Related Tariffs*, 97 F.C.C.2d 1082, Appendix A (1984).

Recognizing as much, SWBT claims that parties have had adequate access to its cost studies in other proceedings. In particular, SWBT claims that AT&T and others were provided with greater access to SWBT's Missouri studies in 1996-97 during the Missouri rate proceedings. *See* Smith AR/MO Decl. ¶ 42. But SWBT leaves out the fact that the permitted review was only of *hard copies* of the cost studies – on SWBT's premises where only limited notes could be taken – and, in the case of key studies, was limited to *the evening before* the hearings at which AT&T cost witnesses were called to testify. SWBT also claims that commenters can refer back to their 1996-97 electronic review of SWBT's *Texas* cost studies, which SWBT claims are the same as the Missouri cost studies. *See* Smith AR/MO Aff. ¶¶ 41-48. Without access to the Missouri studies, there is, of course, no way to verify this claim. Moreover, as SWBT repeatedly emphasizes elsewhere in its application, cost models require the use of state-specific inputs, samples and studies. *See, e.g.* Smith AR/MO Decl. ¶¶ 118-144. SWBT's LPVST model (used to compute UNE loop rates), for example, relies on SWBT's

Missouri Loop Sample Survey, SWBT's Missouri Broadgauge Cost Study, SWBT's CAPCOST Model, SWBT's Missouri Maintenance and Other Cost Factors, none of which have been submitted in this proceeding in electronic form (and most of which have not been provided in *any* form). In any event, SWBT does not deny that commenters would be precluded by SWBT's strict protective order in the Texas or other state proceedings from using SWBT data, models, or access to SWBT mainframe programs gained in other states in any way to restate or revise SWBT's Missouri UNE studies.

SWBT complains that it obtained section 271 approval in Oklahoma, Kansas and Texas without providing access to full electronic versions of its cost studies. *See* SWBT AR/MO Br. at 30. In reality, however, SWBT has provided parties with far *less* access to its Missouri cost studies – both in hardcopy and electronic form – than in any other state in SWBT's five-state region. In all events, SWBT's argument is entirely beside the point. In Oklahoma, SWBT's UNE rates were not based on its cost studies, but were the product of a two party settlement between Cox and SWBT that was supported by no cost studies. It was, therefore, possible to demonstrate SWBT's failure to satisfy its Checklist Item Two burden without access to the SWBT cost studies (that were not used to generate SWBT's Oklahoma rates). In Kansas and Texas, SWBT's recurring rates were not challenged in the federal 271 proceeding – so again, access to SWBT's cost studies was not an issue. Where, as here, rates based on ILEC cost studies are challenged, and the ILEC responds to demonstrated TELRIC violations in those cost studies by unilaterally reducing rates, access to the cost studies is necessary to refute or verify the ILEC's claim that the discounts are adequate. By refusing to provide that access, SWBT leaves the Commission no choice but to deny the Application.

2. The Missouri UNE Rates That SWBT Has Selectively Discounted Far Exceed The Range That Would Be Produced By Any Reasonable Application Of TELRIC Principles.

As demonstrated by numerous commenters in the first proceeding and as explained again below, the SWBT cost studies used to generate SWBT's state approved Missouri rates contained numerous fundamental TELRIC violations that caused substantial rate inflation.

a. SWBT's Permanent Missouri Rates Are Substantially Inflated By Unlawful "Reproduction Cost" Assumptions.

The Commission's rules require that "total element long-run incremental cost [TELRIC] of an element should be measured based on the use of the most efficient telecommunications technology currently available and the lowest cost network configuration, given the existing location of the incumbent LEC's wire centers." 47 C.F.R. §51.505(b)(1). As the Commission has recognized this requires the "replacement cost" estimation methodology that economists and regulators have long recognized best replicates competitive market outcomes. *See* Baranowski AR/MO Decl. ¶¶ 11-12. Under that approach, a TELRIC-compatible cost study should be based on the most efficient network capable of delivering the relevant functionalities without regard to the design, architecture and technologies employed in the existing network. *See id.* SWBT's Missouri cost studies violate this fundamental TELRIC principle.

According the MPSC Staff, SWBT's cost studies are based "upon the most current technology deployed in the *existing network recognizing the existing network design.*" Staff Report at 2 (emphasis added). And the MPSC Staff's finding is confirmed by SWBT witness Smith who admitted that SWBT's cost models used its existing network configuration to derive SWBT's UNE rates. *See* SWBT MO 271 Application, Appendix A-MO, Tab 21 at A-6 (SWBT's cost studies reflect "the mix of equipment used today") ("Smith AR/MO Aff."); *id.* at A-8; *cf. Local Competition Order* ¶ 684 (rejecting UNE pricing methodologies that would allow

incumbent LECs to "recover costs based on their existing operations, and prices for interconnection and unbundled elements that reflect inefficient or obsolete network design").

SWBT's impermissible reproduction cost assumptions were particularly prevalent in SWBT's loop cost studies which are based on SWBT's loop sample results combined with its embedded historical installed cost per cable foot. *See* Baranowski AR/MO Decl. ¶ 13. There were few forward-looking modifications made by SWBT to either the survey input data or the historical cable investment per pair. *See id.* Instead, SWBT's survey data replicates the inefficiencies of its embedded network by incorrectly assuming that the feeder and distribution cable sizes in place today are reflective of the forward-looking efficient cable sizes. *See id.* That necessarily overstates costs because SWBT's network evolved piecemeal over time, with capacity added in increments as actual and forecasted demand increased, it was sometimes more efficient to add another smaller cable to a route, resulting in multiple, smaller sized cables where a single, larger size cable would have been more efficient. *See id.*[9]

SWBT has also conceded that its Missouri loop rates do not reflect the cable sizes and runs that an efficient, cost-minimizing competitor would deploy, but instead simply reprice SWBT's embedded 1996 cable inventory: "All of the cable sizes and their corresponding lengths from the company inventory of cable are used in the calculation of the average pair foot investment for the total cable including feeder and distribution." Smith MO Reply Aff. at ¶ 43. *See also id.* at ¶ 41 ("SBC keeps records of the types and amounts of cable placed in its network. This inventory, used with the current 'Broadgauge' costs for cable, was used to help develop the

[9] In addition, because SWBT's LPVST model relies on a survey of sample loops from its existing network for inputs, it reproduces historical cable placement patterns and does not reflect the most efficient outside plant configuration. *See* Baranowski AR/MO Decl. ¶ 14. For instance, the model makes no adjustments to account for changes in demographics or other forward-looking variables. The MPSC Staff Report acknowledges these concerns, but neither the Staff nor the MPSC itself made any effort to address the problem. *See id.*

average cost per pair foot for feeder and distribution"). That is another plain violation of the Commission's replacement methodology.

SWBT has offered no reasonable justification for its use of these impermissible reproduction assumptions. SWBT simply states that its cost models are not based *entirely* on replication costs and that they include many replacement cost assumptions. *See, e.g.*, Smith AR/MO Aff. ¶¶ 65-79; Smith MO Reply Aff. at ¶¶ 35-39. SWBT goes on to provide a few examples where it purportedly did use proper a replacement approach. *See* Smith AR/MO Aff. ¶¶ 65-79. AT&T has never claimed otherwise. *See, e.g.*, AT&T MO Comments at 14; Baranowski AR/MO Decl. ¶ 16. But compliance with the TELRIC rules in *some* respects obviously cannot cure other admitted violations of those rules. TELRIC requires an approach that replaces a BOC's existing technologies, equipment and architectures *whenever* more efficient replacements are available; not a "hybrid" approach that makes some correct replacement assumptions but, in other important respects, assumes reproduction of the existing architectures, equipment and technologies.

b. All Of SWBT's Permanent UNE Rates Are Inflated by Depreciation, Common Cost, and Power and Engineering Assumptions That Violate Basic TELRIC Principles.

Depreciation. As demonstrated by AT&T, DOJ and other parties, SWBT's Missouri rates are based on cost studies that violate TELRIC by significantly understating depreciation lives for critical inputs, and thereby overstating depreciation expenses. *See, e.g.*, DOJ MO Eval. at 16-17; WorldCom MO Comments at 9. SWBT has still provided no reasonable justification for its radically short depreciation lives, nor any explanation of how its depreciation lives were developed. In fact, SWBT's proposed depreciation lives – as adopted by the MPSC – appear to be based on nothing more than "black box" subject matter "expert"

opinions (a handful of which were later arbitrarily adjusted by the MPSC Staff based on "benchmarking" considerations). *See* Staff Report at 94-114; Smith AR/MO Aff. ¶¶ 97-98. Thus, there is no way to determine whether those rates were properly developed. *See* Baranowski AR/MO Decl. ¶¶ 18-19.

SWBT attempts to justify its black box depreciation lives as consistent with the depreciation lives that it uses for financial reporting purposes.[10] But that would only confirm that SWBT's depreciation lives violate TELRIC principles. Financial depreciation lives are designed to be conservative and to err on the side of protecting shareholders, not to determine the actual cost of a network. *See* Baranowski AR/MO Decl. ¶ 19. As explained by GTE, financial accounting lives are governed by the Generally Accepted Accounting Principle ("GAAP") of "conservatism" which "prefers the *understatement* . . . of net income and net assets where any potential problems exist."[11] For these reasons, financial reporting depreciation lives are generally *shorter* than the actual forward-looking economic depreciation lives that must be used to comply with TELRIC standards.[12]

Regardless of how SWBT's depreciation lives were derived, one fact is clear: for many critical inputs, those depreciation lives are far shorter than those used by other state commissions and this Commission. *See* Baranowski AR/MO Decl. ¶¶ 21-22 . Indeed, SWBT's Missouri depreciation lives are as little as half those approved by state commissions for intra-

[10] Although SWBT's brief says nothing about the source of its depreciation lives and its primary pricing witness, Barbara Smith, concedes only that "*CLEC's contend* that SWBT relied on projected lives" based on financial reporting lives, *see* Smith AR/MO Aff. ¶ 100 (emphasis added), SWBT witness Naughton states that "SWBT and the Missouri Public Service Commission . . . properly used financial accounting lives as opposed to FCC prescribed lives." *See* Naughton AR/MO Aff. ¶ 4.

[11] *See* Comments of GTE and Its Affiliated Domestic Telephone Operations Companies, *Prescription Simplification,* FCC 93-452, at 14 (March 10, 1993).

[12] For the same reasons, MPSC Staff's "benchmarking" analysis of SWBT's proposed rates to financial lives is of no use. *See* Baranowski AR/MO Decl. n.10.

and inter-state services, and often nearly half those of the full range of lives permitted by the Commission for regulatory use. *See id.*

SWBT claims that its depreciation lives also should be compared to the lower depreciation lives used by AT&T, and SWBT provides such a comparison. *See* Smith AR/MO Aff. ¶ 99. That comparison is meaningless. As SWBT is aware, the AT&T lives cited by staff were prescribed by the Commission for AT&T's long distance plant in 1995 (FCC 95-32, released January 31, 1995). Since AT&T had no local loops or local switches at that time, these lives were properly excluded by Mr. Baranowski. As the Commission explicitly recognized, "the underlying considerations that go into estimating the basic factors are sufficiently different for [LECs and IXCs] that they should be considered separately." Depreciation Simplification Order, *Notice of Proposed Rulemaking*, 8 FCC Rcd. 146, 148 (1992); see also Depreciation Order 18, n.2.

SWBT's attempts to defend its low depreciation lives by asserting that: (1) economic depreciation should properly reflect expected obsolescence, and not just physical deterioration, (2) the Commission-approved depreciation lives, which the MPSC rejected, do not, and (3) the SWBT proposals, upon which the Missouri depreciation lives were based, do. *See* Smith AR/MO Aff. ¶¶ 95-101. The latter two statements are plainly false.

This Commission has recently explained that its depreciation lives – which most states have used in establishing UNE rates – fully and properly account for obsolescence and are therefore appropriate for use in estimating the forward-looking costs of UNEs. *See Inputs Order* ¶ 426 ("Commission-authorized depreciation lives are not only estimates of the physical lives of assets, but also reflect the impact of technological obsolescence and forecasts of equipment replacement"). Furthermore, SWBT's assertion that its depreciation rates reflect economic

depreciation lives is also unsupported by the record. SWBT has provided no valid evidence to explain how its depreciation lives were developed or why they should be so much shorter than the depreciation lives used by other state commissions and those prescribed by this Commission. *See* Baranowski AR/MO Decl. ¶¶ 18-25.[13]

Common Costs. As pointed out by AT&T and DOJ three months ago, SWBT's cost study includes an unreasonably high 16.47% additive to account for joint and common costs. *See* DOJ MO Eval. at 17-18; AT&T MO Comments at 18-19. That common cost factor is based entirely on SWBT's pre-1996 Act monopoly level of common costs and is, therefore, not reflective of the forward-looking common costs that an efficient provider would incur. *See* Baranowski AR/MO Decl. ¶ 27. Indeed, SWBT has since conceded that it has become more efficient through mergers and restructuring. *See id.* SWBT's excuse for excluding these cost savings is that "[m]erger savings would not only affect the numerator, but also the denominator [in the common cost factor]." Smith AR/MO Aff. ¶¶ 104-105. This excuse makes no sense, and also reflects bad math. *See* Baranowski AR/MO Decl. ¶ 28. SWBT has explained that its recent mergers will reduce its common costs, not other costs. *See id.* SWBT's common cost factor does not include common costs in the denominator; common costs are only reflected in the numerator. *See* Smith AR/MO Aff. ¶ 103 ("total expenses (*excluding common costs*) represent the denominator) (emphasis added). Therefore, SWBT's efficiency gains will work to lower the numerator while leaving the denominator unchanged, resulting in a lower common cost factor.

[13] SWBT's claim that its radically low depreciation lives are warranted because UNE competition and technological innovation threaten to speed the rate of obsolescence of the modeled network are also both wrong and irrelevant. *See* Naughton MO Aff. ¶¶ 6-8. Only facilities-based competition, not UNE-based competition, could increase the risk of obsolescence of SWBT's facilities; indeed, if anything UNE-based competition should serve to *decrease* such risk by ensuring that SWBT's network is used (and by reducing incentives for SWBT to replace or update old or outdated plant in order to attract new customers) even in the face of competition. And, as SWBT has itself recognized, recent technological advances have tended to increase, not decrease, the useful lives of existing plant. In any event, as explained above, the Commission's prescribed depreciation lives already account for obsolescence.

See Baranowski AR/MO Decl. ¶ 28. But even if SWBT's efficiency gains somehow reduce the numerator and denominator by the same absolute amount, SWBT's common cost factor would still decline precipitously because the relative change in the numerator (which includes *only* common costs) would be much larger than the relative change in the denominator, thereby decreasing the common cost factor (for instance reducing the numerator and the denominator of the fraction 3/4 (or .75) equally by the number one produces (3-1)/(4-1) or 2/3 (or .67), a lower number). *See id.*

There is also a fundamental mismatch between the way SWBT's 16.47% common cost allocator is developed and the costs to which it is being applied which also contributes to SWBT's overstatement of common costs. *See* Baranowski AR/MO Decl. ¶¶ 29-30. SWBT calculates its common cost factor as the ratio of common expenses over total expenses (less common expenses). The factor, however, is applied to costs that also include a calculated return on the forward-looking investment. *See id.* Because there is no equivalent to return on investment in the total expense amount used to develop the ratio, the ratio is overstated. *See id.* SWBT should have, at least, developed its common cost allocator as the ratio of common costs to *revenues* less common costs. Revenues, unlike expenses, include an implicit return on investment and would thus produce a factor that is comparable to the costs to which it is being applied. *See id.*

SWBT concedes that its inflated common cost factor is based on this fundamental mismatch. *See* Smith MO/AR Aff. ¶109 ("[b]ecause the equity portion of the cost of money is excluded in total expenses, there is a slight mismatch"). Nevertheless, SWBT objects to the use of revenues (which include return on capital) as the base for calculating the ratio to avoid the mismatch. *See id.* ¶ 109. According to SWBT, "[u]sing total revenues [as the denominator]

would understate the [common cost] factor" because "total revenues also recovers the cost of money and income tax requirements associated with assets attributable to marketing and services, common operations, and network operations general supervision." *Id.* ¶ 43. This argument is a red herring. With revenues as the *starting point* instead of expenses, the common cost related items identified by SWBT – which were deducted from total expenses in SWBT's own common cost study – would also be properly deducted from total revenues before computing the ratio. *See* Baranowski AR/MO Decl. ¶ 30.

A comparison of Missouri's common cost factor to those in other states confirms that SWBT's common cost factor is far too high. For example, the Kansas Commission recently adopted a factor of 10 percent, Verizon's common cost factor in New Jersey and Pennsylvania is 10 percent, and in Georgia, BellSouth's common cost factor is 5.4 percent. *See* Baranowski AR/MO Decl. ¶ 31. And, based on AT&T's analyses, a reasonable common cost factor for Missouri should be no higher than 8%. *See id.* ¶ 32. SWBT responds by claiming that there are other states where it has successfully implemented extremely high common cost factors. That argument is absurd. In reality, the Missouri common cost factor is much *higher* than the common cost factors used to set rates in the other states in which SBC has sought and obtained section 271 approval. *See id.* If SWBT is correct that the Ameritech, SNET and Pacific Bell states in which it has not even sought section 271 approval of its rates reflect still higher common cost ratios, that is a reason to question whether rates in those states are cost-based, not a reason to assume that SWBT's Missouri rates are cost-based. *See id.*

Power, Engineering and Other "ACES" Model Errors. The MPSC Staff has recognized that the ACES model, which increases all UNE rates with additional capital costs for sales taxes, telecommunications engineering and labor, miscellaneous materials, power

equipment, and buildings to house equipment violates TELRIC principles by incorporating numerous embedded cost factors. Accordingly, the MPSC Staff made several changes to the ACES model in an attempt to fix those problems, but left many problems unaddressed.

Key components of the ACES model, *e.g.*, power and telecommunications engineering and labor, do not incorporate forward-looking costs. *See* Baranowski AR/MO Decl. ¶¶ 33-37. Both the power factor and telecommunications engineering factors within ACES are derived from SWBT's actual experience in providing power for switches and engineering equipment replacements, *see id.*, and that historical experience includes retrofitting and modifying the embedded facility and, in many cases, providing for the removal and disposal of the obsolete equipment. *See id.* None of these activities is required in the forward-looking TELRIC environment, where buildings are specifically sized and powered to meet the requirements of today's forward-looking digital switches. *See id.* Likewise, the ACES model continues to reflect embedded costs for outside plant facilities. *See id.* For example, forward-looking maintenance expenses for metallic cable are based on SWBT's historical relationship of metallic cable maintenance expenses to embedded plant investment. *See id.* No adjustments to historical expenditures are made to reflect the fact that the forward-looking facility is brand new. *See id.* In this regard, the ACES model should, at a minimum, reflect a decrease in the amount of troubles produced by the existing deteriorating plant and a corresponding reduction in trouble repair and maintenance costs. *See id.*

SWBT claims to have addressed some of these problems by transforming its embedded cost factors into forward-looking costs by multiplying those factors by a ratio of current costs to booked costs. *See* Smith AR/MO Aff. ¶ 110. But this process does not account for the fact that SWBT's power and telecommunications engineering factors include tasks such

as retrofitting and modifying SWBT's embedded plant to accommodate new equipment, as well as the removal of obsolete equipment – tasks that are not required in a forward-looking network. *See id.* Merely reducing these values with a forward-looking ratio cannot correct this error – in a truly forward-looking study there would be *no* such costs.

c. SWBT's UNE Loop Rates Are Inflated By Numerous Additional TELRIC Violations.

As demonstrated by AT&T, DOJ and numerous other parties in the proceeding stemming from SWBT's first section 271 application, the cost models used to develop SWBT's UNE Loop Rates for Missouri contain numerous additional TELRIC violations. *See* DOJ MO Eval. at 14-19; WorldCom MO Comments at 12; AT&T MO Comments at 20-23. The adjustments implemented by the MPSC Staff do not even begin to address all of the fundamental flaws in those studies. In fact, the MPSC Staff Report makes clear that it was unable address all of the defects in the SWBT's cost studies. *See, e.g.,* Staff Report at 19 (MPSC Staff made no adjustments to feeder/distribution cable ("FDI") even after noting that "[i]t is important to remember that SWBT's assumption of a single feeder cable terminating to an FDI will overstate the cable costs and overstate the cost of the loop").[14]

Substantially Understated Distribution Fill. SWBT's proposed distribution fill factors ranged from about 30% to 37% and are "based upon the historical working pairs divided by the actual pairs in the loop today. . . . They are not adjusted to be forward-looking." Staff Report at 23.[15] As noted above, this assumption is not forward-looking and reflects usage

[14] *See also id.* at 25 (failing to address cable tapering assumptions even after recognizing that "this assumption fails to recognize the economies of scale associated with the tapering of large cables and will overstate the investment in feeder cable"); Staff report at 18 (failing to address the allocation of dark fiber costs to loop rates even after recognizing that "[t]his would raise some concerns since the unused fiber is dark fiber and the investment associated with dark fiber can be recovered separately").

[15] *See also* Smith MO Reply Aff. ¶ 44 (its factors rely on "*actual* fill factors for distribution cable based on *current levels of total capacity*") (emphasis added).

following many years of rate of return regulation. *See, e.g.*, Staff Report at 13 ("SWBT proposed using their actual fill factors in TELRIC studies. Staff believes the use of actual fill factors is not forward-looking"); Baranowski AR/MO Decl. ¶¶ 29-42. The Commission's TELRIC rules require that fill factors reflect "the proportion of a facility that *will be* 'filled.'" *Local Competition Order* ¶ 682 (emphasis added).[16]

Beyond recognizing that SWBT's proposed distribution fill factors were not TELRIC compatible, MPSC Staff provided no meaningful analysis to determine what the correct fill factors ought to be. Instead, MPSC Staff simply required a slight increase to a 40% across-the-board fill factor, finding that figure appropriate because 40% is higher than the highest fill factor proposed by SWBT. Indeed, the only reason cited by MPSC Staff for recommending a 40% fill factor is that it is conservative to the extent that it is near SWBT's non-TELRIC rate of 36.61%. Staff Report at 14.

MPSC Staff provided no reason for rejecting AT&T's proposed fill factor of 50%, nor could it. AT&T's proposed fill factor of 50% is actually conservative compared with the distribution fill inputs by density zone of the FCC's Synthesis Costing Model. The Commission has recognized that an efficient provider would design its distribution network to be filled at 50-75 percent of capacity. *See Inputs Order* ¶ 188 n.392. Moreover, a 50% fill factor is right in line with that recommended by other state commissions with cost structures that are similar to Missouri. For instance, the Kansas Corporation Commission directed SBC to use a 53%, New York Public Service Commission adopted a 50% fill factor, and the mid-point of the distribution fill factors adopted by Massachusetts is 52.5%. *See* Baranowski AR/MO Decl. ¶ 41.

[16] *See also Inputs Order* ¶ 195 ("The administrative fill factors are determined per engineering standards and density zone conditions. These factors are independent of an individual company's experience and measured effective fill factors. The administrative fill factors would be the same for every efficient competitive firm").

SWBT complains that the Commission should not rely on its Synthesis Model fill factor findings because the Commission ruled in the *Kansas/Oklahoma 271 Order* that the Synthesis Model should not be used to estimate UNE rates. *See* Smith MO Aff. ¶ 6; Smith AR/MO Aff. ¶ 75. But in that very same order the Commission recognized that the appropriateness of measuring UNE fill factors against its Synthesis Model findings. *See Kansas/Oklahoma 271 Order* ¶ 80. That is because, regardless of any other incongruities between the Synthesis Model and the Commission's TELRIC rules, the Commission employed the same forward-looking approach to estimating fill factors in its universal service proceedings that it has required in the UNE context. SWBT nonetheless urges the Commission to disregard its Synthesis Model fill findings – the product of nearly two years of intensive workshops and litigated proceedings to which SWBT was a party – because the Commission "effectively approved" a 40 percent fill factor "in granting Southwestern Bell's section 271 application in Texas. SWBT AR/MO Br. at 37. In reality, the Commission did no such thing. SWBT's Texas distribution fill factors were not even litigated in the section 271 proceeding and thus the Commission had no occasion to approve them, implicitly or otherwise.

Failure to Reflect Forward-looking Mix of Integrated Digital Loop Carrier. SWBT's treatment of digital loop carrier (DLC) systems significantly overstates SWBT's loop rates. By SWBT's own admission integrated DLC is the efficient forward-looking technology. *See* Baranowski AR/MO Decl. ¶¶ 43-44. However, SWBT's cost studies, as adopted by the MPSC, do not employ this efficient integrated DLC exclusively on a forward-looking basis. Instead, SWBT's cost studies assume that an arbitrary and undocumented ratio of integrated DLCs to non-integrated DLCs will be deployed on a going forward basis. *See* Staff Report at 24

(explaining that SWBT's cost study assumes that 75% of DLCs are not integrated); Smith MO Aff. at A-10 (noting that non-integrated DLCs are used 75% of the time).

SWBT implies that the DLC ratio should have been set at *zero* because "[u]nbundled loops cannot be extracted or 'groomed' from an IDLC system without significant additional expense." Smith AR/MO Aff. ¶ 90. SWBT provides no cost study support for any such assumption, much less the data and electronic cost studies that would be necessary to test the assertion that these unidentified unbundling costs would exceed the enormous central office savings associated with IDLC. Moreover, SWBT is simply wrong in asserting that unbundled loops cannot be extracted from efficient IDLC systems. *See* Baranowski AR/MO Decl. ¶¶ 43-44. Most fundamentally, such "extraction" is not even necessary in the UNE-P scenario through which almost all UNE-based customers are served. *See id.*

Improper Allocation of Dark Fiber Costs to Loop Rates. SWBT's UNE loop rates are inflated with dark fiber costs. *See* Staff Report at 18. SWBT justifies this error on the grounds that it failed to include those costs in its dark fiber rates. *See* Smith AR/MO Aff. ¶ 93. That might provide SWBT with a justification for seeking to increase its dark fiber rates, but it certainly cannot justify misallocating dark fiber costs to *loop* rates. In the alternative, SWBT argues that the dark fiber costs belong in loop rates because CLECs might not purchase its dark fiber separately. *See* Smith AR/MO Aff. ¶ 94. On that "logic," if CLECs are only buying loops, then switching and transport costs ought to go into loop rates as well. And that approach is expressly forbidden by the Commission's TELRIC rules. 47 C.F.R. 51.505(d)(4) (expressly disallowing recovery of costs to "subsidize . . . services . . . other than the element for which a rate is being established"); *see also Local Competition Order* ¶¶ 682 (allowing incumbent LECs to "recover the forward-looking costs directly attributable to the specified element. . . . Directly

attributable forward-looking costs include the incremental cost of facilities and operations that are *dedicated to the element*") (emphasis added).

Failure to Allow for Tapering Feeder Cable. SWBT concedes that its cost studies assume that each feeder segment terminates to only one feeder/distribution interface (FDI). *See* SWBT AR/MO at 38; *see also* Staff Report at 18. In other words, those cost models determine the size of the feeder cable by the size of the FDI and then assume that the feeder segments have the same number of cable pairs because it connects directly to the FDI. *See* Baranowksi Decl. ¶¶ 47-49. However, the MPSC Staff correctly pointed out that, "[i]n reality, a feeder segment may originate as a very large cable and taper as the cable terminates to multiple FDIs." Staff Report at 18. Consequently, MPSC Staff concluded that this assumption "increase[s] the cost of the feeder segment because it precludes the use of large size cable at the beginning of the feeder segment and fails to recognize the tapering of the feeder cable." *Id.* "SWBT's methodology would increase the number of smaller cables which have a higher cost per pair." *Id.*

SWBT claims that by basing cable costs on its existing cable inventory, rather than on efficiently designed forward-looking cable placement, it has compensated for this error by understating distribution cable costs while overstating feeder cable costs. *See* Smith AR/MO Aff. ¶ 73. As noted above, that explanation merely confirms that SWBT violated TELRIC by employing unlawful reproduction cost assumptions. In any event, SWBT has provided no evidence that the two claimed errors exactly cancel each other out or, indeed, that its cable cost assumptions caused any understatement at all. Moreover, because SWBT has never provided other parties or this Commission with full electronic access to those models – either in state proceedings or in federal proceedings – SWBT's assertions cannot be confirmed. *See* Baranowski AR/MO Decl. ¶ 48.

In all events, what is available in the record strongly suggests that SWBT's claim is baseless. When asked by the Missouri Staff to quantify and address the cable tapering problem, SWBT claimed ignorance, stating that it did not have any data related to the cable tapering and could not incorporate tapering into its loop cost study. *See* Staff Report at 18. And the few cost study files that SWBT has recently provided belie any notion that the feeder/distribution allocation SWBT now claims solves the problem. *See* Baranowski AR/MO Decl. ¶ 49. Even the largest cable pair in SWBT's cable cost study documentation is much smaller than 4200 pairs. *See id.* SWBT therefore cannot claim that its cost studies taper 4200 pair cable feeder down to 600 pair cable feeder at the FDI. *See* Smith AR/MO Aff. ¶ 73. Moreover, SWBT's cost study documentation shows that a single sized cable is assigned to each FDI, further refuting SWBT's claims that its cost studies account for tapering of different sized cable pairs at the FDI. *See* Baranowski AR/MO Decl. ¶ 49.

Structure Sharing. SWBT's cost studies assume an unrealistically low percentage of conduit sharing. Specifically, SWBT assumes a scant 0.09% of its forward-looking conduit investment will be shared with other utilities. SWBT apparently bases this estimate on its historical conduit sharing experience in Missouri, a methodology which is clearly inconsistent with forward-looking principles and TELRIC. *See* Baranowski AR/MO Decl. ¶ 50. A proper forward-looking approach would, at a minimum, account for the fact that a new local telephone entrant in Missouri would seek out opportunities to share both existing and planned underground structure as a means of controlling forward-looking investments. *See id.* The Commission's Synthesis Model recognizes this fact by assuming that underground structure sharing will occur in all but the most sparsely populated areas. In particular, for areas where the lines density is 100 to 200 per square mile, the Synthesis Model assumes that 15 percent of underground structure

investment (which, in Missouri, generally consists of conduits) is borne by others. *See id.* In the highest density zones, the Synthesis Model assumes a 45 percent sharing rate for underground structure investment. *See id.* The average underground sharing rate assumed by the Synthesis Model for SWBT Missouri is nearly 40 percent. *See id.* SWBT's .09 percent conduit sharing assumption is, therefore, completely out of line with that used by the Commission's Synthesis Model and with any legitimate forward-looking approach.

SWBT's Non-Recurring Loop Conditioning Charges Violate TELRIC. Portions of SWBT's copper loop plant contain "line disturbers" (*e.g.*, load coils, bridge taps, or repeaters). That equipment was used in the past to inexpensively improve the quality of voice-grade services over its copper loops. *See* Baranowski AR/MO Decl. ¶ 51. However, that equipment also "blocked" high-frequency signals (*e.g.*, xDSL services) that are transmitted over copper loops. The process of removing load coils, bridge taps and repeaters from copper loops in order to allow high-frequency services to be provided over those loops is referred to as "line conditioning." SWBT's Missouri rates improperly include an astronomical nonrecurring line conditioning charge for all lines that exceed 12,500 feet. And in recent proceedings, SWBT has proposed more than 50 percent increases to those NRCs. *See id.*

These nonrecurring line conditioning charges are not compatible with basic TELRIC principles. The Commission's rules require that any "costs incumbents impose on competitors for line conditioning [must] compl[y] with [the Commission's] pricing rules for nonrecurring costs" – *i.e.*, with TELRIC pricing rules. *See UNE Remand Order* ¶¶ 193-94; *see also id.* ¶ 194 n.369 (citing 47 C.F.R. §§ 51.501 *et seq.* & § 51.507(e); *Local Competition Order* ¶¶ 749-751. As explained above, the relevant TELRIC costs are those of a "reconstructed local network [that] will employ the most efficient technology." *Local Competition Order* ¶ 685.

Therefore, an incumbent LEC may only recover from new entrants the line conditioning costs that it would incur if it had constructed its local network from the ground up using the most efficient design and technology, assuming only the locations of existing wire centers. In other proceedings, incumbent LECs, including SWBT's holding company, SBC, have conceded that such a network would not contain *any* line disturbers for loops shorter than 18,000 feet, so that all such loops should be able to support xDSL-based advanced services.[17] *See, e.g.*, Public Notice, *Mpower Communications Corp. Files Petition for Expedited Declaratory Ruling on TELRIC Pricing Standards for Loop Conditioning Charges*, CCB/CPD No. 01-06 (Released March 16, 2001), Comments of BellSouth at 10; SBC at 5; Verizon at 7. In other words, under TELRIC – and under the industry guidelines that have been in effect for the past 20 years – no separate charge is appropriate for conditioning loops shorter than 18,000 feet.

Even if some infrequent and minor types of line conditioning would occur in a forward-looking network, the charges imposed by SWBT in Missouri are clearly excessive, and appear to double-count those costs. SWBT's maintenance and common cost factors, which are recovered through SWBT's nonrecurring loop rates, are based on its *historical* accounting records to determine its historical expenditures for maintaining loops and other network equipment as well as its historical common costs associated with that equipment. *See* Baranowski AR/MO Decl. ¶ 53. These historical records include the costs that the incumbent LECs incurred to install, maintain, repair and remove load coils, bridge taps, repeaters and any other line disturbers. Thus, the maintenance and common cost factors used by incumbent LECs to set their existing UNE rates for the recovery of maintenance and common costs already include most, if not all, line conditioning costs. *See id.* Allowing SWBT to recover line

[17] In fact, industry guidelines for local exchange networks have required, *for over two decades,* that all loops sold be unencumbered and capable of supporting digital services. *See* Baranowski AR/MO Decl. n. 14.

conditioning costs again through separate (non-recurring or recurring) charges constitutes blatant double recovery.

SWBT's line conditioning charges also appear to be vastly inflated by use of non-TELRIC methodologies. For instance, SWBT's cost studies assume that one technician visit is required to condition each line pair contained in a particular binder group. *See* Baranowski AR/MO Decl. ¶ 56.[18] Thus, for a fifty pair binder group, these incumbent LECs assume that a technician has to be dispatched 50 *separate times* to remove line disturbers from that single binder group. That assumption plainly violates TELRIC because the more efficient method of line conditioning would be to assume that the technician makes only one visit, in which all line pairs in that binder group are upgraded. Accordingly, the costs of line conditioning for a pair in a fifty pair binder should include only $1/50^{th}$ of the cost of a technician's visit to upgrade an entire binder group. *Cf. UNE Remand Order* ¶ 194 (requiring states to compute costs line conditioning costs in a way that is consistent with the Commission's pricing rules).

Any permissible line conditioning charges should be recovered only in the form of recurring monthly charges, rather than the exorbitant nonrecurring fees that the Commission has found to be a barrier to entry. *See* Baranowski AR/MO Decl. ¶¶ 54-55. Moreover, these recurring charges should be spread over *all* loops in a particular serving area to ensure that these costs are recovered in a competitively neutral and nondiscriminatory fashion rather than arbitrarily depending upon where an incumbent LEC happens to assign unconditioned loops. *See id.* In this way, each carrier is assessed charges in a nondiscriminatory fashion that appropriately reflect its relative use of the network. *See* 47 U.S.C. §§ 251(c)(2), (3), (6), and 252(d)(1); 47 C.F.R. § 51.503(a).

[18] Copper cable pairs within a sheath are engineered in "binder groups" because copper cable is manufactured in groups of pairs that are wrapped with a binding ribbon in either 50 or 25 pair groupings.

d. SWBT's Switching Rates Are Inflated By Additional TELRIC Violations.

Switch Discounts. Forward-looking cost studies assume a "scorched-node" environment where the only elements of the embedded network are the locations of existing wire centers. *Local Competition Order* ¶ 685. All assets necessary to service demand for telecommunications in the SWBT Missouri service territory would therefore have to be newly purchased. *See* Baranowski AR/MO Decl. ¶ 57. Thus, the applicable switch discounts should be those which are available for new switching equipment.

The cost model adopted by the MPSC, on the other hand, computes switch discounts based on "attributable growth" – the volume and type of switches that would be needed to expand SWBT's *existing* network. *See* Staff Report at 32. This assumption violates core TELRIC principles by allowing incumbent LECs to recover costs based on their existing network architecture and operations. And the MPSC Staff correctly recognizes that "discounts for growth jobs are typically less than the discounts for new switches." *Id.*

SWBT argues that basing switching costs on the costs of purchasing new switches at the best available discount would result in a "flash-cut" of switch investment "at a single point in time" and is therefore not an appropriate measure of switch discounts. Smith AR/MO Aff. ¶ 54. To the contrary, such a "flash cut" of switch investment is precisely what the Commission's TELRIC methodology contemplates. As the Commission has stated, the rates for network elements should be "based on costs that assume that wire centers will be placed at the incumbent LEC's current wire center locations, but . . . the *reconstructed* local network will employ the most efficient technology for reasonably foreseeable capacity requirements." *Local Competition Order* ¶ 685. And it is for precisely these reasons that the Commission specifically rejected incumbent LEC arguments that "costs associated with upgrading switches" should be included in

its Synthesis Model and instead held that forward-looking switching costs should be determined using newly purchased switches efficiently sized to meet existing demand. *Inputs Order* ¶ 315.[19]

The MPSC Staff compounded the error in SWBT's switch discount computations by applying those wrong (and insufficient) discounts only to materials, and not to engineering and installation, notwithstanding MPSC Staff's recognition that "other firms receive discounts on these [latter] items." Staff Report at 32. Although materials comprise the majority of new switching equipment investment, engineering and installation costs are substantial. *See* Baranowski AR/MO Decl. ¶ 60. Failure to provide for standard discounts on these items significantly contributes to excessive TELRIC switching costs.

SWBT's explanation for its failure to apply switch discounts to engineering and installation – that the particular SWBT contracts that it elected to provide to the MPSC do not provide discounts for engineering and installation – is not consistent with the TELRIC rules. The question is not whether those particular SWBT contracts include such discounts but whether an efficient provider reconstructing a network today could and would demand them. The Texas switch usage cost studies recently produced by SWBT show that the Texas Staff ordered the switch discounts to be applied to materials, installation and engineering.[20] *See* Arbitration Award, Public Utilities Commission of Texas, Docket Nos. 16189, 16196, 16226, 16285, 16290, 16455, 17065, 17579, 17587, 17781, at Appendix A, page 1, Issues 2-7 (December 17, 1997).

[19] In particular, the Commission has found that "[s]witches, augmented by upgrades, may provide carriers the ability to provide supported services, but do so at greater costs. Therefore, such augmented switches *do not constitute cost-effective forward-looking technology*." *Inputs Order* ¶ 317 (emphasis added).

[20] Further, SWBT's attempt to justify its Missouri switching rates by comparing them to those proposed by AT&T in Texas confirms that SWBT's Missouri UNE switch rates are excessive. *See* Smith AR/MO Aff. ¶ 53. The UNE switch rates relied on by SWBT in this proceeding are about 50 percent higher than those proposed by AT&T in Texas. *See id.*

Hardware Factor. SWBT's Missouri switch usage costs also include investment additives for additional switch hardware that SWBT claims is necessary to provide certain features. *See* Baranowski AR/MO Decl. ¶¶ 63-64. The MPSC Staff was critical of these additional switch investments, explaining that the investment additives are substantial and, more importantly, that there is the possibility that the additional hardware investment is already included in the investments produced by the Switch Cost Information System/Model Office ("SCIS/MO") and are being recovered elsewhere in the SWBT cost studies. Staff Report at 43. Staff was also concerned that, because the hardware additive percentages may be based on old technology and not less expensive forward-looking switch technology, the costs may be further overstated. Staff, however, made no recommendations to correct these overstatements.[21]

3. SWBT's Rates Include Myriad Rates That Have Never Been Reviewed By the MPSC or By this Commission.

Scores of SWBT's Missouri UNE charges were based on flawed SWBT cost studies that have never even been *reviewed* by the MPSC or were imported wholesale from Texas with no attempt to assess the reasonableness of their application to Missouri. There can be no serious argument that these "interim" rates – including dedicated transport cross-connects, NXX migration, and multiplexing, as well as many others – are cost-based. Indeed, SWBT has not even attempted to meet its burden of demonstrating that these rates are cost-based.

[21] SWBT's response to the MPSC's concern that SWBT may have double-counted port costs through its hardware factor is simply to declare, without the slightest explanation or support, that its cost studies handled the matter correctly. *See* Smith AR/MO Aff. ¶¶ 60-64. If the explanation was as straightforward as SWBT now makes it out to be, SWBT presumably would have explained the matter to the MPSC Staff's satisfaction. It did not do so, and its unsupported assertion in this proceeding cannot be credited, particularly in light of SWBT's admission in the Kansas rate proceedings that it *did* double recover such costs. *See* Order Setting Inputs for Cost Studies, *Joint Application of Sprint et al. to Open a Generic Proceeding on SWBT's Rates for Interconnection, Unbundled Elements, Transport, and Termination, and Resale*, Docket No. 97-SCCC-149-GIT, at A-71 (pointing out that SWBT concedes that it double recovers for universal tone receivers, once through the hardware factor and once through the SCIS model).

To be sure, the Commission ruled in its *Texas 271 Order* that an interim rate solution may be a "sufficient basis for granting a 271 application when an interim solution to a *particular* rate dispute is reasonable under the circumstances, the state commission has demonstrated its commitment to our pricing rules, and provision is made for refunds or true-ups once permanent rates are set." *Texas 271 Order* ¶ 236 (emphasis added). But none of those circumstances is present here. The preceding discussion makes clear that the MPSC has not adequately demonstrated a commitment to TELRIC with respect to the SWBT rates it has reviewed and approved.[22] And, as explained below, interim solutions plainly are *not* reasonable under the circumstances.

As SWBT explains, its interim rates come from many sources. Many were adopted by the MPSC in the December 23 Order which decided an AT&T/SWBT arbitration proceeding. In that proceeding, SWBT proposed a series of new cross-connect, multiplexing and other charges. AT&T contended that each of the proposed charges reflected features or functionalities that were reflected in the already-established permanent UNE rates and that allowing *any* additional charge would result in double recovery. The Commission nonetheless authorized SWBT to impose many of the proposed charges, without adjustment, on an "interim" basis pending review of SWBT's cost studies. Neither the MPSC, its Special Master, nor the MPSC Staff even attempted to determine whether the SWBT proposals they endorsed were TELRIC-compliant. *See* Order at 32 ("the Special Master recommends that SWBT's rates be adopted on an interim basis because the [Staff] believes that *a* rate *may* be appropriate. . . . For the[se] reasons . . . the Commission finds that SWBT's proposed interim rates and language

[22] Interim rates are especially inappropriate where, as here, there is very little existing competition. Interim rates only decrease the likelihood of entry by increasing market risk. In this case, many of these interim rates were developed more than four years ago. Thus, unlike the situation in Texas, there is now powerful marketplace (continued)

should be adopted") (emphasis added). Three years later the completely unreviewed "interim" rates remain in place.

Other interim rates, including DSL rates, were simply imported from Texas and have never been reviewed by the MPSC. *See* PSC 271 Order at 34. And, even assuming (contrary to fact) that the Texas rates are cost-based, neither SWBT nor the MPSC has attempted to demonstrate that the relevant costs for these particular UNEs are similar in Texas and Missouri. Finally, given the MPSC's history and the fact that it has never even considered rates for any of these UNEs, there is no reason to believe that permanent rates will be established any time soon (or, if they are, that they will bear any resemblance to the interim imported Texas rates). If SWBT's conduct in ongoing arbitration proceedings is any guide – where SWBT has proposed massive rate inflation *above* the M2A permanent rate levels – SWBT can be expected to seek much higher permanent rates to replace the interim rates.[23] In short, there is no reasonable excuse for SWBT's failure to propose and seek review of these scores of UNE rates given its proven ability to do so in Texas and elsewhere.

In sum, SWBT's § 271 application for Missouri is based on: (1) permanent UNE rates for Missouri that are generally higher than UNE rates in any other state in that region even though the costs of UNEs in Missouri is lower than that in any other state in that region; (2) interim UNE rates that were adopted by the MPSC over two years ago which have never been

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evidence that the Missouri rates effectively foreclose competitive entry. There can be no reasoned reliance on interim rates in these circumstances.

[23] A recent Arbitration Order released by the MPSC points out that "SWBT has proposed rates greater than the rates contained in the M2A," that "there are problems with SWBT's cost studies," and that "[e]ven SWBT witnesses admitted the inadequacy of some of their cost studies." Arbitration Order, *Application of AT&T Communications of the Southwest, Inc., et al. for Arbitration of Unresolved Issues with Southwestern Bell Telephone Company Pursuant to Section 252(b) of the Telecommunications Act of 1996*, Case No. TO-2001-455 (June 7 2001) ("*June 7 Arbitration Order*").